Enterotoxemia

By
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Enterotoxemia

- Enterotoxemia (also known as **overeating** or **pulpy kidney disease**) is a condition caused by the absorption of a large amount of toxins from the intestines.

- Caused by bacteria called ***Clostridium perfringens*** types C & D naturally found in the soil and as part of the normal *microflora* in the gastrointestinal tract of healthy sheep and goats.

Enterotoxemia

- The toxins cause **enterocolitis** (inflammation of the intestine), increase the permeability of the blood vessels, and become absorbed in the blood causing **swelling in the lungs and kidneys.**

- *Clostridium perfringens* thrives on starch and sugars. When lambs/kids overeat, undigested starch and other carbohydrates provide a medium that allows the *Clostridium perfringens* organism to grow and proliferate.

Enterotoxemia

- In these condition, these bacteria can rapidly reproduce in the animals, producing large quantities of toxins.

- **Young animals are most susceptible**.

- Although adult animals are also susceptible to enterotoxemia, they develop immunity due to frequent exposure to these toxins.

Enterotoxemia

Factors Associated with Enterotoxemia Outbreaks:

- When kids and lambs excessively consume milk or feed with high quantities of grain.
- While recovering from an illness or distress; when natural immunity is compromised.
- As a consequence of heavy infestations of **gastrointestinal parasites**, such as ***nematodes*** (worms) and ***coccidia*****.**
- When animals have a diet rich in grains and low in dry matter (hay or green grass).
- When animals have any condition or disease that slows the peristalsis (motility of the gastrointestinal tract).

Enterotoxemia

Symptoms:

- Sudden death occurs only minutes after a lamb or a kid shows signs of central nervous system alteration (excitement and convulsion)
- Loss of appetite
- Abdominal discomfort, shown by kicking at the belly and arching the back
- Profuse diarrhea (watery consistence with or without blood)

Diagnosis

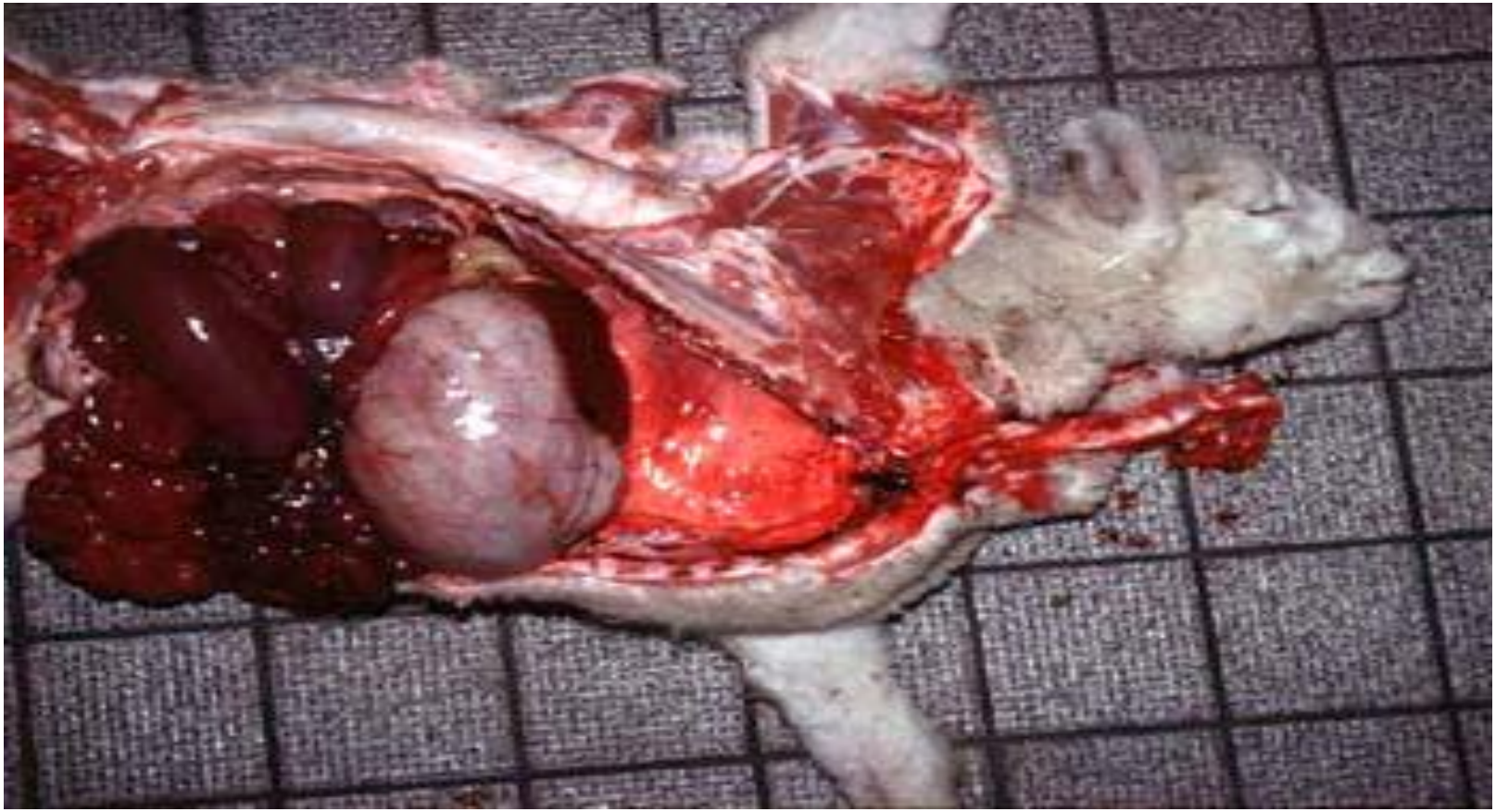
- Postmortem data are important for the diagnosis of enterotoxemia.
- Diagnosis is based on clinical signs, and history of sudden death that can be confirmed by necropsy.
- Diagnosis can be confirmed by positive identification of enterocolitis (inflammation of the intestine).

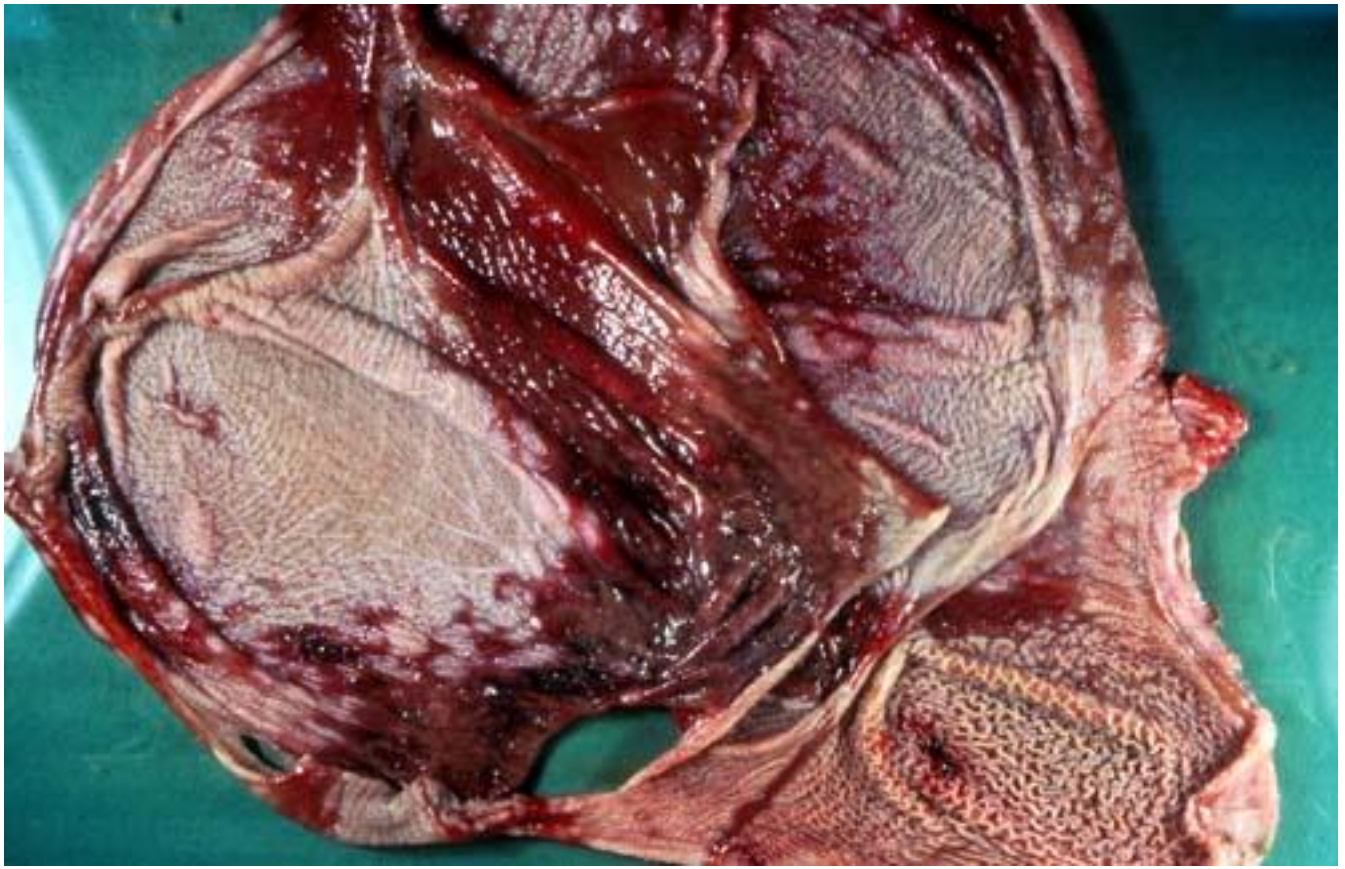
Diagnosis

- *Clostridium perfringens types C & D* from the feces, and gut content and kidneys cultured and isolated from the affected animals.

- The presence of glucosuria (high levels of sugar in the urine) can indicate enterotoxemia.

- The brain and kidney tissues may show softening.





Enterotoxemia

***Treatment*:**

- Administering C & D Antitoxin. Kids are normally treated with 5 ml of C & D Antitoxin subcutaneously.
- Administering penicillin.
- Orally administering an antacid.
- Administering anti-bloating medication.

Enterotoxemia

***Treatment*:(usually un successfully)**

- Reducing pain by applying ***Banamine*** .
- Administering thiamin (vitamin B1) intramuscularly.
- Use fluids intravenously or and using **corticosteroids**.
- Using probiotics after treatment with antibiotics to encourage repopulation of the *microflora* in the rumen and guts.

Prevention

- All animals in a herd should be vaccinated against enterotoxemia.
- Vaccination will reduce the chances that animals will contract enterotoxemia
- Some of the vaccines against enterotoxemia are also associated with the tetanus vaccine.

Prevention

Vaccination protocol:

- Vaccinate pregnant animals with C/D &T vaccines during the **fourth month of pregnancy** to enrich the colostrum with antibodies.

- All young animals should be vaccinated at four weeks of age and then 30 days later.

- Vaccinate bucks and all adult animals once a year.


TOXIPRA
PLUS
250 ml

Prevention

- The vaccine comprise *Clostridium Perfringens type (B,C and D), Chauvoei, Novyi, Septicum and Titani.*
- Vaccine administrated subcutaneous or intramuscular But in sheep and goat only subcutaneous.
- Vaccinate and revaccinate within an interval of 20 to 30 days.

Prevention

- Dose:
- In sheep and goat (2ml in adult), (1ml in young animal).
- In cattle and fattening calves (4ml/animal)
- In lactating calves (2ml/animal)
- In rabbit (0.5 ml/animal)
- In horse (2ml)

Prevention

- Avoid overeating.
- Gradually adjust feeder lambs to rations containing more than 50 percent concentrate.
- Avoid sudden changes in ration ingredients, especially those affecting palatability.
- Maintain a steady source of clean water
- Avoid wet bedding .
- Vaccination.